Claims

1. A method for detecting gases or vapours emitted from materials under conditions at which there is a risk of the onset of fire, said method comprising sampling gas from the region of the material using an ion mobility spectrometer, detecting the ion peak of volatilised material.

2. A method according to claim 1 which is effected in a data processing or computer facility, a telephone exchange, a space station, or an industrial plant.

3. A method according to claim 1 ~~or claim 2~~ wherein sampling is effected continuously.

4. A method according to claim 1 ~~or claim 2~~ wherein sampling is effected at predetermined time intervals.

5. A method according to ~~any one of the preceding~~ claims wherein the ion mobility spectrometer is connected to an alarm system.

6. A method according to claim 5 wherein the alarm is triggered when an ion peak reaches a predetermined intensity level.

7. A method according to claim 5 wherein the alarm is triggered when any ion peak increases significantly over a period of time.

8. A method according to any one of claims 5 ~~to 7~~ wherein the alarm is triggered when a feature characteristic of thermal degradation is detected.

9. A method according to ~~any one of the preceding~~ claims 1 wherein the ion mobility spectrometer is set to detect volatile material released from an electrical component.

10. A method according to claim 9 wherein the electrical component is a printed circuit board or a resistor.

11. Apparatus for detecting a heightened fire risk in an environment using the method ~~as claimed in any one~~ of claims 1 ~~to 10~~.

12. An ion mobility spectrometer adapted such that it is able to detect increases in the amounts of gases or vapours emitted from materials present in a particular environment, under conditions at which there is a heightened risk of the onset of fire.

13. An ion mobility spectrometer for use in a method according to any one of claims 1 to 10.

14. An ion mobility spectrometer when used in a method according to any one of claims 1 to 10.

15. The use of an ion mobility spectrometer for the detection of a heightened risk of fire in an environment.

16. The use according to claim 15 wherein controls of the ion mobility spectrometer are arranged so that it is able to detect increases in the amounts of gases or vapours emitted from materials present in the environment under conditions at which there is a risk of the onset of fire.